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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/649,750

08/26/2003

Robert B. Cooper

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EXAMINER

CHANG, YEAN HSI

ART UNIT

PAPER NUMBER

2835

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

**Office Action Summary****Application No.**

10/649,750

**Applicant(s)**

COOPER ET AL.

**Examiner**

Yean-Hsi Chang

**Art Unit**

2835

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-35 is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/15/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because of the following informalities: The "the communication network" lacks antecedent basis. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 and 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Monroe (US 2004/0230352 A1).

Monroe teaches an expansion module (18, fig. 1) configured to be disposed between an avionic device connector (105) of an avionic device (10) and a corresponding aircraft connector (26) of an aircraft for providing a plurality of electrical junctions between the avionic device and the aircraft for electrical transmissions therebetween and communicating a signal representative (for example, video) of at

least one of the electrical transmissions therefrom to a communication network (see fig. 7), the expansion module comprising: a first connector (56) having a plurality of electrical terminals configured to mechanically engage and thereby electrically connect to the aircraft connector, a second connector having a plurality of electrical terminals configured to mechanically engage and thereby electrically connect to the avionic device connector (see fig. 3), and an electrical circuit (shown as supporting electronics in fig. 3) defining a plurality of electrical junctions between the electrical terminals of the first and second connectors for connecting the aircraft connector and the avionic device, the circuit configured to communicate a signal representative of at least one of the electrical transmissions between the avionic device and the aircraft to the communication network (see fig. 7) (claim 1); wherein the electrical terminals of the second connector are structured to correspond to the electrical terminals of the first connector such that the expansion module is configured to be disposed between the corresponding avionic device connector and aircraft connector (see fig. 3) (claim 2); wherein the electrical terminals of the first and second connectors are ARINC-type connection elements configured to connect to ARINC-type connection elements of the avionic device and aircraft connectors (see page 4, [0038] and [0039]) (claim 3); wherein the electrical circuit is configured to communicate the signal over an Ethernet connection to an Ethernet communication network (see page 2, [--14]; any of the systems may be an Ethernet network) (claim 4); at least one printed circuit board (fig. 3) defining the electrical circuit, wherein the first and second connectors are mounted on the at least one circuit board (claim 6); wherein the electrical circuit is configured to

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connect to a power source (through 22) (claim 7); and the expansion module is configured to transmit the electrical transmissions between the avionic device and the aircraft without substantially modifying the transmissions (fig. 3) (claim 8).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5 and 9-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monroe in view of Applicant Admitted Prior Art (AAPA).

Monroe discloses the claimed invention except: showing the first connector are female socket elements and the terminals of the second connector are male pin elements; teaching the expansion module further comprising a tray configured to receive the avionic device and secure the avionic device to the aircraft; and teaching a communication network comprising at least two expansion modules.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Monroe by selecting the terminals of the first connector being female sockets and the terminals of the second connector being male pin elements, since terminals of a connector may be either female sockets or male

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pin elements, and it has been held that rearranging parts of an invention involves only routine skill in the art. MPEP §2144.04 VI C.

AAPA teaches a tray (10, fig. 1A) configured to receive an avionic device (12) and secure a line replaceable unit on an aircraft. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Monroe with the tray taught by AAPA for replaceably securing the avionic module to the aircraft.

Monroe teaches a communication network (fig. 8) comprising, in addition to section 2: one expansion module (18, details shown in section 2, hereinabove) configured for communicating with the system (claim 17); a controller (30) providing power to the circuits (see [0073]) (claims 18-19); a communication device (78-82, fig. 8) (claim 20); and a data storage device (for example, 10) for recording data from the network (claim 21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Monroe adding an additional expansion module to the system for increasing the reliability by redundancy, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. MPEP §2144.04 VI B.

***Allowable Subject Matter***

6. Claims 29-35 are allowed.

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7. The following is a statement of reasons for the indication of allowable subject matter: The best prior art of record, Monroe (US 2004/0230352 A1), Graves et al. (US 5,946,472), Birkedahl et al. (US 5,778,203), and DiGiorgio et al. (US 6,286,060 B1), taken alone or in combination, fails to teach or fairly suggest: a method for retrofitting an aircraft having a plurality of avionic devices with avionic device connectors connected to aircraft connectors of the aircraft, the method comprising: disconnecting an avionic device connector of a first avionic device from a respective aircraft connector, disposing an expansion module between the avionic device connector and the aircraft connector such that the expansion module connects the avionic device to the aircraft, delivering an electrical transmission between the avionic device and the aircraft via the expansion module, generating a signal representative of the electrical transmission in the expansion module, and communicating the signal from the expansion module as set forth in claim 29. Claims 30-35 are dependent claims from claim 29.

### ***Correspondence***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yean-Hsi Chang whose telephone number is (571) 272-2038. The examiner can normally be reached on 08:00 - 16:00, Monday - Friday.

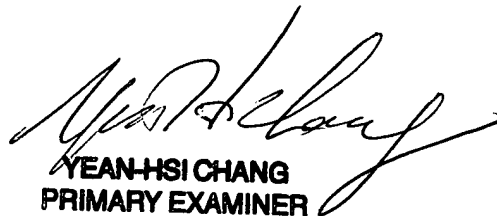
If attempts to reach the examiner by telephone are unsuccessful, the Art Unit phone number is (571) 272-2800, ext. 35. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding

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the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8558.

Yean-Hsi Chang  
Primary Examiner  
Art Unit: 2835  
May 10, 2005

  
**YEAN-HSI CHANG**  
**PRIMARY EXAMINER**